



## WAVEGUIDE TO LAMINATED WAVEGUIDE TRANSITION AND METHODOLOGY

Inventors: Ke-Li WU; Yong HUANG, both of Hong Kong, China

### RELATED APPLICATION(S)

[0001] The present patent application is related to and claims the benefit of priority from commonly-owned U.S. Provisional Patent Application No. 60/395,952, filed on July 13, 2002, entitled "Waveguide to Laminated Waveguide Transition and Methodology", which is hereby incorporated by reference in its entirety for all purposes.

### TECHNICAL FIELD

[0002] The present invention relates to an apparatus and/or methodology involving transitioning an electromagnetic wave between two waveguides. Embodiments of the present invention are especially suitable for use where there is a scale mismatch between the two waveguides, for example, when the two waveguides include materials in their interior that have different (finite) dielectric constants.

### BACKGROUND OF THE INVENTION

[0003] Metal waveguides and laminated waveguides are examples of transmission lines that transport electromagnetic energy. A metal waveguide is usually constructed as a metal tube in which an electromagnetic signal wave propagates along the interior of the tube by reflecting back and forth between the walls of the waveguide. A metal waveguide can be filled either with air or dielectrics and its cross-section is generally circular or rectangular.